

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Claim Status / Explanation of Amendments

Claims 1-20 are pending and were rejected. As to matters of form, claims 5 and 7-8 were objected to for allegedly containing awkward language. [6/26/08 Office Action, p. 2, paragraph 3]. Applicants have amended claims 5 and 8 such that “wherein that wherein” is changed to “wherein.” Claim 7 is cancelled without prejudice or disclaimer. Withdrawal of the objection to claims 5 and 7-8 is respectfully requested.

The drawings were objected to under 37 C.F.R. § 1.83(a) as allegedly failing to show every feature specified in the claims. In particular, the Office Action contends that the electron transport layer recited in claims 10 and 18 must be shown or the features must be cancelled from the claims. [6/26/08 Office Action, p. 2, paragraphs 4-5]. Applicants have cancelled claims 10 and 18 without prejudice or disclaimer, thereby rendering the objection as moot. Applicants reserve the right to pursue the cancelled claims in a continuing application.

As to the merits, claims 1-20 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,566,807 to Fujita, et al. (“Fujita”) in view of U.S. Patent No. 6,376,694 to Uchida, et al. (“Uchida”). [6/26/08 Office Action, p. 3, paragraph 7].

By this paper, claims 1-2 are amended and claims 3, 13, and 16 are cancelled without prejudice or disclaimer. Claim 1 is amended to incorporate the subject matter of cancelled claims 3 and 7 whereas claim 2 is amended to incorporate the subject matter of cancelled claims 13 and 16.

No new matter will be introduced into this application by entry of these amendments.
Entry is respectfully requested.

B. Claims 1-2, 4-6, 8-9, 11-12, 14-15, 17 and 19-20 are Patentable over Fujita in view of Uchida

Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of claims 1-2, 4-6, 8-9, 11-12, 14-15, 17 and 19-20 as allegedly being unpatentable over Fujita in view of Uchida. As set forth in detail below, Fujita and Uchida, whether alone or in combination, do not teach, disclose, or suggest that the first organic compound is a silole derivative with $\geq 1\%$ and $\leq 50\%$ by weight of the total weight of the electron transport layer. The Section 103 rejection should therefore be withdrawn.

Applicants' claim 1, as amended, recites:

1. An organic electroluminescent device comprising a pair of electrodes and a plurality of organic compound layers, which include an electron transport layer, provided between the pair of electrodes,

the electron transport layer including at least a first organic compound and a second organic compound, wherein

the first organic compound possesses a higher electron mobility than the second organic compound; and

the second organic compound possesses a higher glass transition temperature than the first organic compound,

wherein the first organic compound is a silole derivative and is from 1% or more to 50% or less by weight of the total weight of the electron transport layer.

At the outset, the Office Action recognizes and asserts that "Fujita does not expressly disclose that the first organic compound is a silole derivative." In attempting to remedy this deficiency the Office Action refers to Uchida and contends that "Uchida teaches a silole derivative compound that may be applied to functional materials in an organic EL display to improve efficiency and longevity of the display (col. 2, line 30-col. 3, line 67). Uchida further

teaches that the silole derivative can be added to an electron transport layer to take advantage of the electric properties of the silole ring (col. 7, lines 10-26).” [6/26/08 Office Action, p. 4, paragraph 9]. Applicants respectfully disagree.

Applicants’ claim 1 recites an organic electroluminescent (EL) device comprising, *inter alia*, an electron transport layer which includes at least a first and second organic compound wherein the first organic compound is a silole derivative that is $\geq 1\%$ and $\leq 50\%$ of the total weight of the electron transport layer. Thus, the electron transport layer itself includes a silole derivative with a weight percentage x that falls in the range $1 \leq x \leq 50$ wt. % along with a second organic material which is *not* a silole derivative. On the other hand, Uchida discloses, *inter alia*, that:

The organic EL element of the present invention can have a structure in various forms and basically has a structure in which an organic layer containing the silole derivatives represented by Formulas (1) and (2) is interposed between a pair of electrodes (anode and cathode). If necessary, a hole-injecting material, a hole-transporting material, an electroluminescent material, an electron-injecting material, an electron-transporting material, etc. can be added to the silole derivative layer described above. Further, other electroluminescent materials can be added to this electroluminescent layer so as to emit light having a different wavelength and to elevate the electroluminescent efficiency. [Uchida, col. 7, lns. 15-26].

Here, Uchida teaches that an organic layer containing the silole derivative may be used in conjunction with an electron transporting layer or in place of an electron transporting layer. Thus, Uchida teaches that a silole derivative layer may be used as but one layer among a plurality of layers in an electronically or optionally functional device.

Uchida does not, however, teach that the silole derivative may be directly incorporated within the electron transport layer itself. That is, Uchida does not teach, disclose, or suggest an “electron transport layer including at least a first organic compound and a second organic

compound, wherein ... the first organic compound is a silole derivative and is from 1% or more to 50% or less by weight of the total weight of the electron transport layer” as recited in Applicants’ amended claim 1. An organic EL device which includes an electron transport layer comprising 1 to 50 wt. % of a silole derivative and an organic material other than the silole derivative exhibits a longer half-life and higher luminous efficiency. This advantage is exemplified by Tables 1-4 on pp. 20, 23, 25, and 28 of Applicants’ specification. Applicants respectfully assert that this configuration and its specific advantages are neither taught nor disclosed by Uchida.

Since Uchida cannot be used to overcome the acknowledged deficiencies in Fujita, Applicants respectfully assert that each and every element of claim 1 is not taught by Fujita and Uchida. More specifically, Fujita and Uchida – whether alone or in combination – fail to teach, disclose, or suggest an organic EL device comprising a “electron transport layer including at least a first organic compound and a second organic compound, wherein ... the first organic compound is a silole derivative and is from 1% or more to 50% or less by weight of the total weight of the electron transport layer” as recited in Applicants’ claim 1. Applicants respectfully submit that claim 1 is patentably distinct from Fujita and Uchida for at least this reason.

Since independent claim 2 is directed to an organic EL device comprising this same patentable element it is deemed to be allowable for at least similar reasons. Dependent claims 4-6, 8-9, 11-12, 14-15, 17 and 19-20, which depend either directly or indirectly from claim 1 or 2, are asserted to be in condition for allowance for at least similar reasons. Withdrawal of the Section 103 rejection is therefore respectfully requested. Applicants respectfully submit that all of the pending claims are now allowable and early, favorable action in that regard is requested.

Applicants have chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Furthermore, Applicants have not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claims from which they depend are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicants, however, reserve the right to address such rejections of the dependent claims in the future as appropriate.

CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is earnestly solicited. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 5000-5263.

Respectfully submitted,
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Dated: September 24, 2008

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